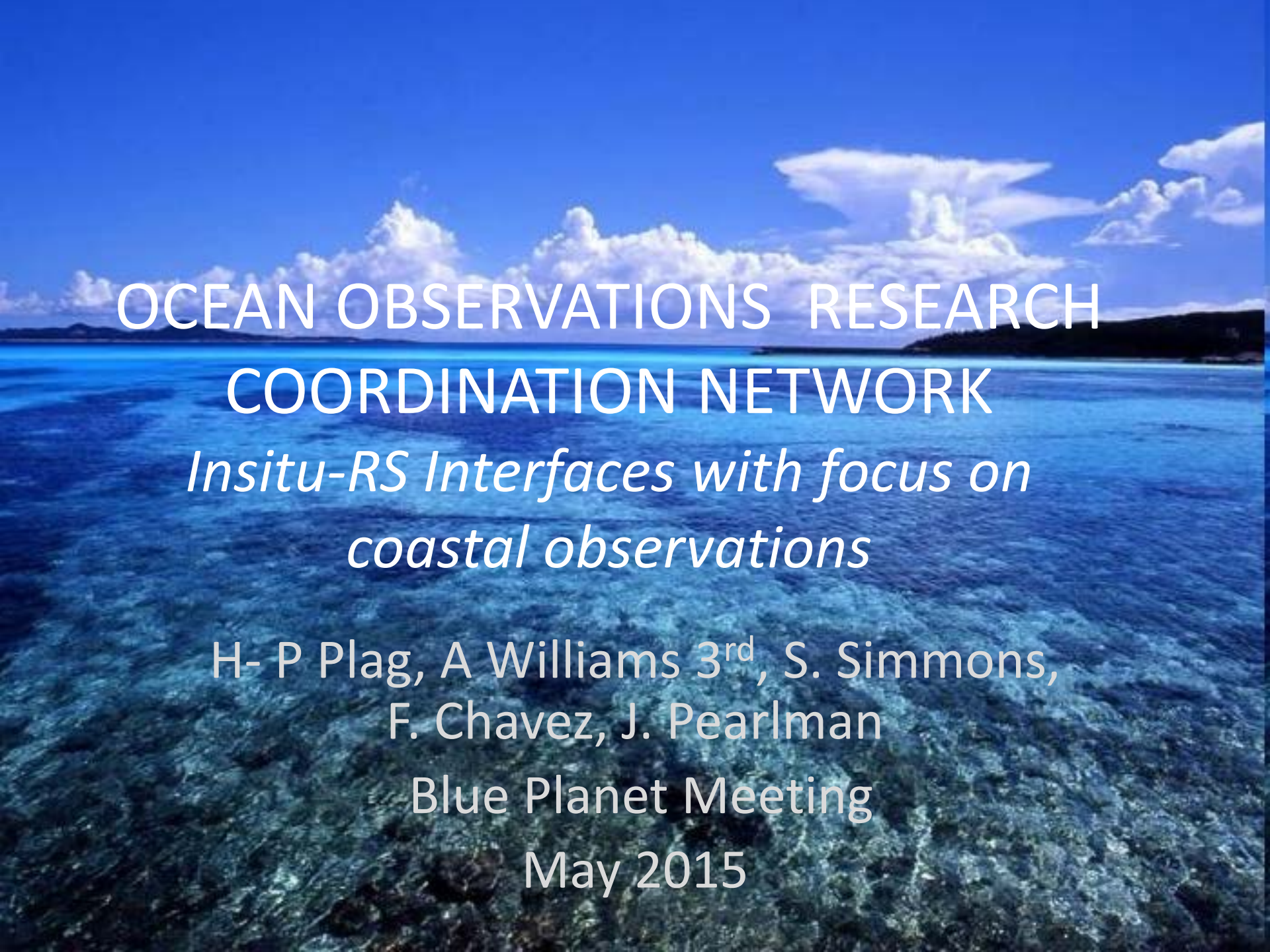


OCEAN OBSERVATIONS RESEARCH COORDINATION NETWORK

Insitu-RS Interfaces with focus on coastal observations

H- P Plag, A Williams 3rd, S. Simmons, F. Chavez, J. Pearlman

Blue Planet Meeting

May 2015

Insitu-RS Interfaces

Thoughts on integrating future satellite measurements with future in situ measurements from ocean observing systems to study ocean/coastal processes.

Focus is on coastal environments with a scenario of regions of large river influx.

Jim Yoder WHOI
Curt Davis Oregon State University
Eric Delory Oceanic Platform of the Canary Islands
Heidi Dierssen, University of Connecticut
Paul DiGiacomo, NOAA-NESDIS
Amala Mahadevan, WHOI
Frank Muller-Karger, Univ of South Florida
Dave Siegel, University of California, Santa Barbara
Heidi Sosik, WHOI

Satellite Observations

- **We support a balanced system of geosynchronous and polar satellites**. As a longer term objective, **we also support the development of a constellation of small satellites** covering all latitudes at high frequency (1-3 hours)
  - The PACE mission for global ocean color (**PACE : Pre-Aerosol, Clouds, and ocean Ecosystem)**
  - GEO-CAPE provides “continuous” information on coastal ocean
  - **(GEO-CAPE : Geostationary Coastal and Air Pollution Events)**
  - The Hyperspectral Infrared Imager mission

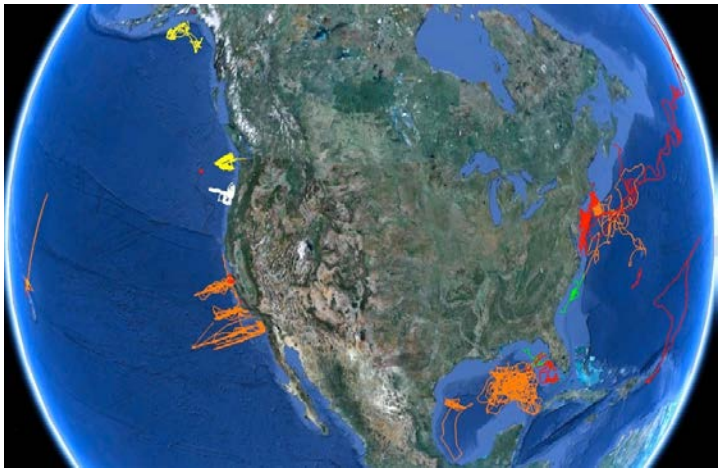
In situ Observations

- For the coastal ocean, we recommend that the **new generation of coastal ARGO floats include bio-optical sensors (IOCCG 2011)**, -- transmissometers (water clarity), chlorophyll, oxygen and backscattering meters (back-scattered solar spectral irradiance to compare with satellite-derived measurements).

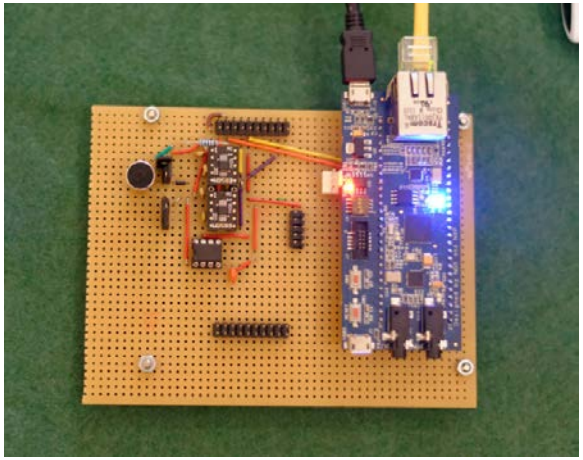
- For data compatibility**, instrumentation should be the same or similar to that already available on open ocean Argo floats**

In situ Observations

From O. Schofield

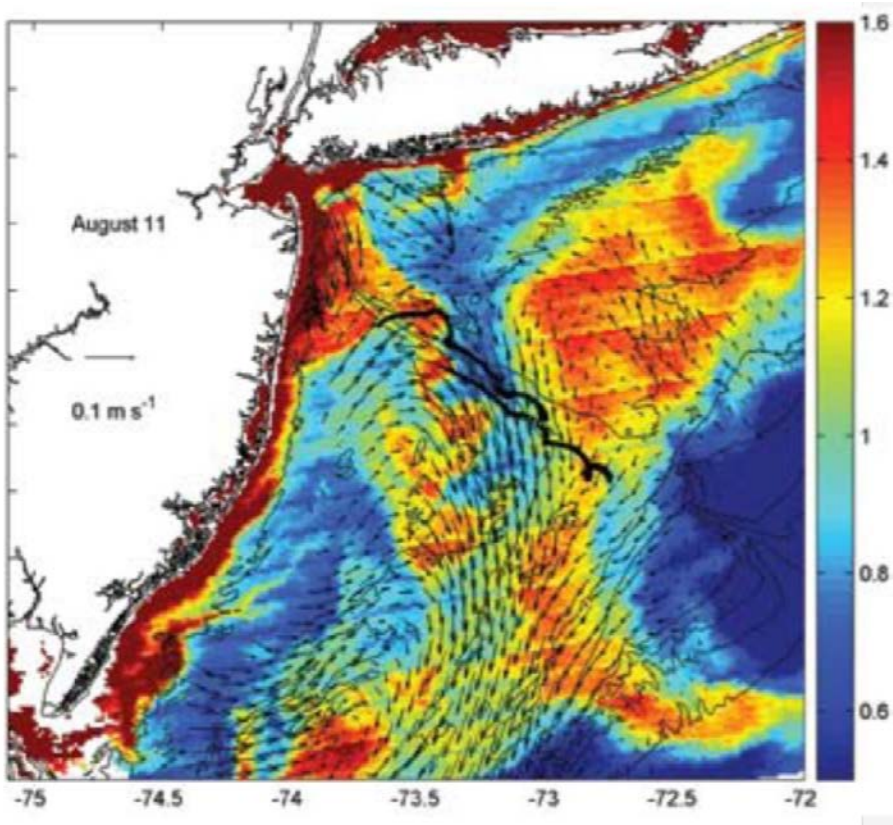


- **Further use of gliders and AUVs for the coastal ocean**
- **Expand the use of targets (i.e. platforms) of opportunity**
- **New forms of communication and sensor control**
  - sensor webs
  - interface standards such as OGC “PUCK



Data Analyses and Modeling

- **All coastal data (*in situ* and satellite) needs to be quality assured, and made available in a consistent format in near-real time.**
- **High-resolution (< 1 km) coupled physical bio-optical models of the coastal ocean are essential** for the merging of these disparate data sets and must be an integral part of any coastal observing system with format that can be used by other scientists and the general public.



Chlorophyll a (mg m^{-3}).
New York Area Aug 11 2006
Courtesy of J. Yoder

Thank you